

ABSTRACT OF THE DISCLOSURE

A SOI substrate having an etch stopping layer, a SOI integrated circuit fabricated on the SOI substrate, and a method of fabricating both are provided. The SOI substrate includes a supporting substrate, an etch stopping layer stacked on the supporting substrate, a buried oxide layer and a semiconductor layer sequentially stacked on the etch stopping layer. The etch stopping layer preferably has an etch selectivity with respect to the buried oxide layer. A device isolation layer is preferably formed to define active regions. The device isolation, buried oxide and etch-stop layers are selectively removed to form first and second holes exposing the supporting substrate without damaging it. Semiconductor epitaxial layers grown on the exposed supporting substrate therefore have single crystalline structures without crystalline defects. Thus, when impurity regions are formed at surfaces of the epitaxial layers, a high performance PN diode having a superior leakage current characteristic may be formed.